IEEE 802.11g Wireless Network PCI Adapter

User's Manual

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Chapter 1 About IEEE802.11g Wireless Network PCI Adapter

The IEEE802.11g Wireless Network PCI Adapter is a standard PCI adapter that fits into any standard PCI slot in a desktop. The IEEE802.11g Wireless Network PCI Adapter is an enhanced high-performance, that supports high-speed wireless networking at home, or at office. IEEE802.11g Wireless Network PCI Adapter is able to communicate with any 802.11b and 802.11g compliant products.

1-1 Features and Benefits

1. Support 802.11b/g solution in 2.4GHz frequency band.
2. Working range up to 800 ft. in an open environment.
3. Seamless connectivity to wired Ethernet and PC network LAN's augments existing networks quickly and easily.
4. Greater flexibility to locate or move networked PCs.
5. Wireless connection without the cost of cabling.
6. Easy to install and user friendly, just Plug and Play.
7. Low power consumption.
8. Supports a variety of operating systems (Win98SE/ME/2000/XP)
9. Security Capable: WEP, WPA, WPA2 supported.
10. Provides Window based Easy Utility for management.

1-2 Applications

IEEE802.11g Wireless Network PCI Adapter offers a fast, reliable, cost-effective solution for wireless client access to the network in applications like these:

1. **Remote access to corporate network information**
   E-mail, file transfer and terminal emulation.
2. **Difficult-to-wire environments**
   Historical or old buildings, asbestos installations, and open area where wiring is difficult to deploy.
3. **Frequently changing environments**
   Retailers, manufacturers and those who frequently rearrange the workplace and change location.
4. **Temporary LANs for special projects or peak time**
   - Trade shows, exhibitions and construction sites where a temporary network will be practical.
   - Retailers, airline and shipping companies need additional workstations during peak period.
   - Auditors requiring workgroups at customer sites.
5. **Access to database for mobile workers**
   Doctors, nurses, retailers, accessing their database while being mobile in the hospital, retail store or office campus.
6. **SOHO (Small Office and Home Office) users**
   SOHO users need easy and quick installation of a small computer network.
7. **High security connection**

   The secure wireless network can be installed quickly and provide flexibility.

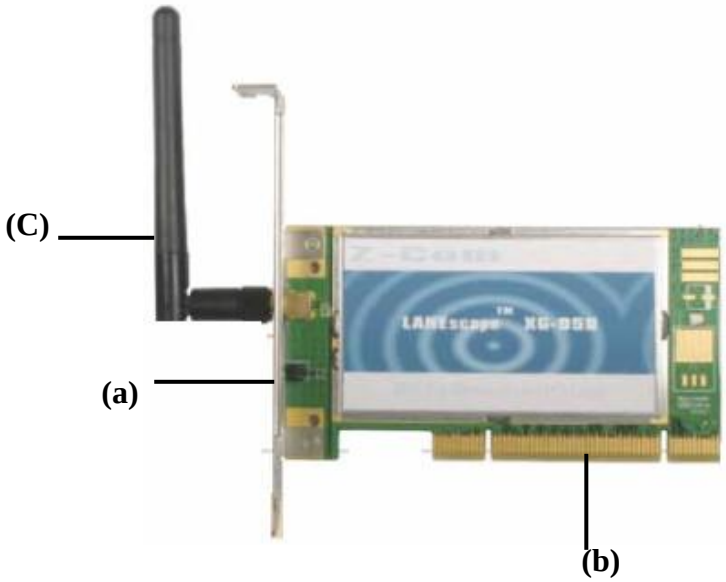
1-3 Product Kit

IEEE802.11g Wireless Network PCI Card comes with the following items. Please go through each item below. If any of listed items appears to be damaged or missing, please contact your local dealer.

IEEE802.11g Wireless Network PCI Adapter

- IEEE802.11g Wireless Network PCI Adapter…..…….…….….. x 1
- Product CD…….…..… x 1
- User's Manual…….…..… x 1

1-4 Knowing Your IEEE802.11g Wireless Network PCI Card



(a) LINK LED: When the Wireless Network Card has a link to a wireless network, the light will be solid.

(b) Card Connector: This is the side of the Wireless Network Card that fits into the PCI slot of your PC.

(c) Antenna

Chapter 2 Getting Started

This chapter describes the instructions that guide you through the proper installation of your IEEE802.11g Wireless Network PCI Adapter for the Windows XP/2000/ME/98SE operating systems. The complete installation of the IEEE802.11g Wireless Network PCI Adapter consists of the following steps:

STEP 1: Insert your IEEE802.11g Wireless Network PCI Adapter into your laptop.
STEP 2: Install the corresponding driver and utility.
STEP 3: Set basic settings.
STEP 4: Finish Installation.

2-1 Before Installation

In addition to the items shipped with the client adapter, you will also need the following in order to install the adapter:

1. A computer equipped with a PCI slot.
2. Windows XP/2000/98SE/ME (with a Windows installation CD-ROM, diskettes for use during installation).
3. Minimum 5 Mbytes free disk space for installing driver and utility program.

2-2 Insert the 802.11g Wireless Network PCI Adapter

To install the IEEE802.11g Wireless Network PCI Adapter, please do the following:

1. Find an available PCI slot on your computer.
2. Insert the PCI Adapter into the PCI slot.

Chapter 3 Install Driver for Windows

This section describes the installation of the IEEE802.11g Wireless Network PCI Adapter driver for the Windows 98SE/ME/2000 and Windows XP operating systems. The installation procedures for Windows XP refer to ***3-1 Set up IEEE802.11g Wireless Network PCI Adapter for Windows XP***; for Windows 2000 please see ***3-2 Set up IEEE802.11g Wireless Network PCI Adapter for Windows 2000;*** for Windows 98SE/ME refer to ***3-3 Set up IEEE802.11g Wireless Network PCI Adapter for Windows 98SE/ME.***

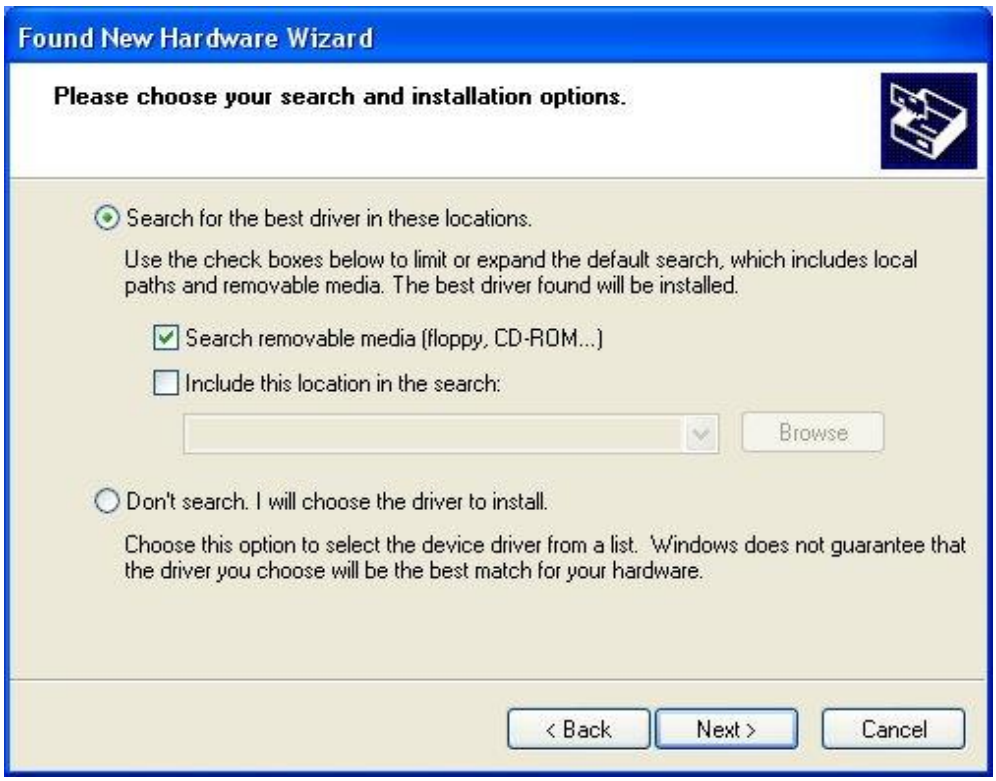
Note: Before you start the installation, you are advised to keep the Windows CD-ROM in case you might need certain system files.

3-1 Set up IEEE802.11g Wireless Network PCI Adapter for Windows XP

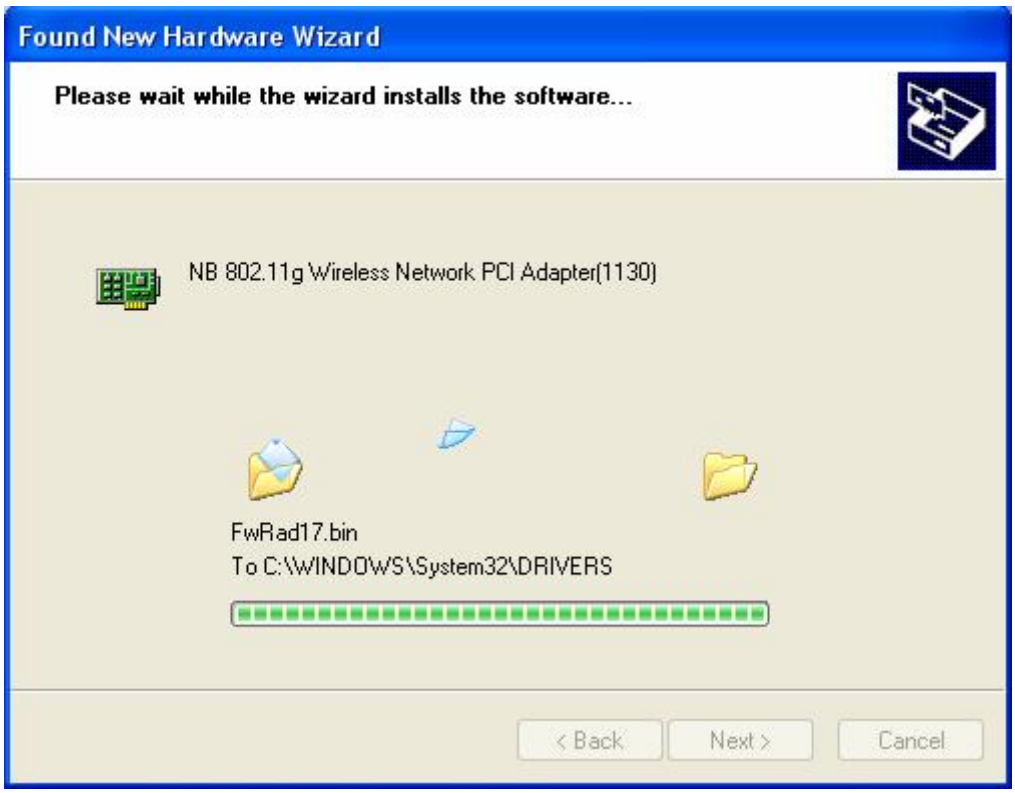
Step 1: After inserting the IEEE802.11g Wireless Network PCI Adapter into the PCI slot on your PC, the Windows will auto-detect the IEEE802.11g Wireless Network PCI Adapter and a "**Found New Hardware Wizard**" window will show up. Select "**Install from a list or specific (Advanced)**" to install the driver.

Found New Hardware Wizard
Welcome to the Found New Hardware Wizard
This wizard helps you install software for:
Network Controller
If your hardware came with an installation CD or floppy disk, insert it now.
What do you want the wizard to do?
Install the software automatically (Recommended)
Install from a list or specific location (Advanced)
Click Next to continue.
< Back
Next >
Cancel

Step 2: Insert the Product CD-ROM into the appropriate drive. Click on **Next** to install the driver.


Found New Hardware Wizard
Please choose your search and installation options.
Search for the best driver in these locations.
Use the check boxes below to limit or expand the default search, which includes local paths and removable media. The best driver found will be installed.
Search removable media (floppy, CD-ROM...)
Include this location in the search:
Browse
Don't search. I will choose the driver to install.
Choose this option to select the device driver from a list. Windows does not guarantee that the driver you choose will be the best match for your hardware.
< Back
Next >
Cancel

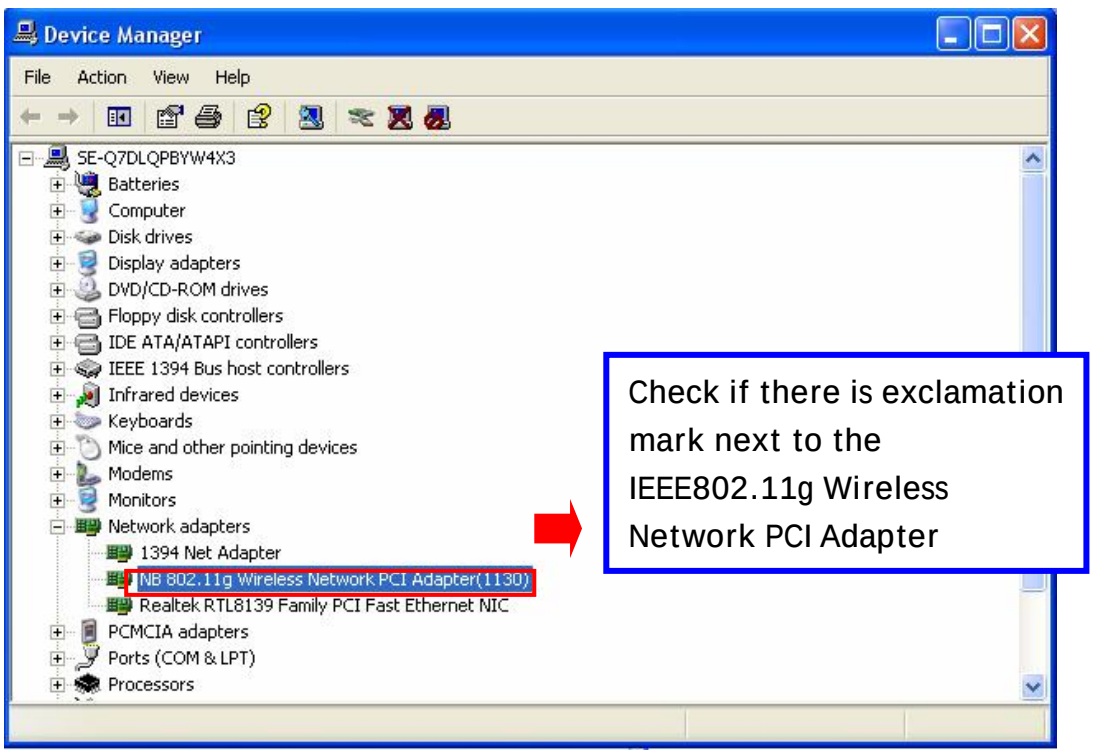
Step 3: The windows will find "**IEEE802.11g Wireless Network PCI Adapter**" and start copying corresponding files into the system. Click on **Next** to continue.



Step 4: Click **Finish** to complete the installation.

Found New Hardware Wizard
Completing the Found New Hardware Wizard
The wizard has finished installing the software for:
NB 802.11g Wireless Network PCI Adapter(1130)
Click Finish to close the wizard.
< Back
Finish
Cancel

Step 5: Right click "**My Computer**" from **Start**, select **Properties**, go to the **Hardware** tab and click the **Device Manager** button to see if any exclamation mark appears next to the **Network Adapter/IEEE 802.11g Wireless Network PCI Adapter**. If no, your IEEE802.11g Wireless Network PCI Adapter is working well.



After installing the IEEE802.11g Wireless Network PCI Adapter, the Windows XP will display a "Wireless Network Connection # " message.

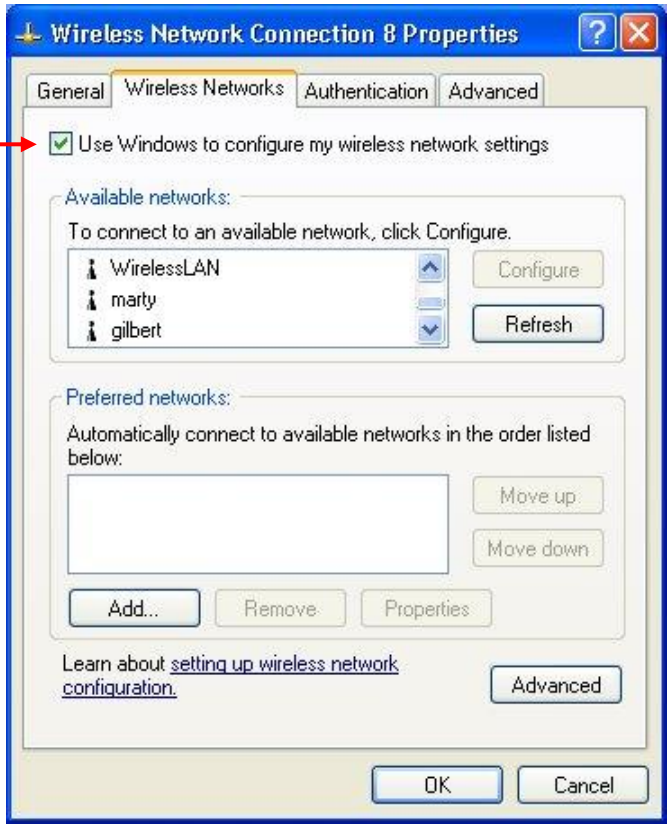
Wireless Network Connection 6
One or more wireless networks are available.
To see a list of available networks, click here.
lows XP Professional
valuation copy. Build 2600
11:39 AM

Click on the message and the "*Automatic Wireless Network Configuration*" will then appear automatically. You may click on **Connect** button to allow users to connect to an available wireless infrastructure network (Access Point). You may also click the **Advanced** button to make advanced configuration for the IEEE802.11g Wireless Network PCI Adapter, shown as below.

Connect to Wireless Network
The following network(s) are available. To access a network, select it from the list, and then click Connect.
Available networks:
WLAN
hschung
demolab
This network requires the use of a network key (WEP). To access this network, type the key, and then click Connect.
Network key:
If you are having difficulty connecting to a network, click Advanced.
Advanced...
Connect
Cancel

For more information on using the automatic wireless network configuration please refer to Windows XP **Help** file.

Warning: You must choose one way to configure Wireless LAN PCI Card either of using our WLAN Utility by un-checking this check box or using Windows XP ***Automatic Wireless Network Configuration*** first by checking this check box.



However, the WLAN Utility, which comes with the IEEE802.11g Wireless Network PCI Adapter, provides you more tools to configure the IEEE802.11g Wireless Network PCI Adapter and monitor the wireless connection. For more information on installing and using the WLAN Utility, please refer to the following sections "*Install the WLAN Utility*" and "*Use the WLAN Utility*".

Note: To use the WLAN utility under Windows XP, you need to disable the ***Automatic Wireless Network Configuration*** first. Steps are described as follows:

- Right click the **Network Connections** icon. Select **Properties**.
- Go to the **Wireless Networks** tab.
- Uncheck the "**Use Windows to configure my wireless network settings**" check box and click the **OK** button (see the above picture).

3-2 Set up IEEE802.11g Wireless Network PCI Adapter for Windows 2000

Step 1: After inserting the IEEE802.11g Wireless Network PCI Adapter into the PCI slot on your PC, Windows will auto-detect the IEEE802.11g Wireless Network PCI Adapter.

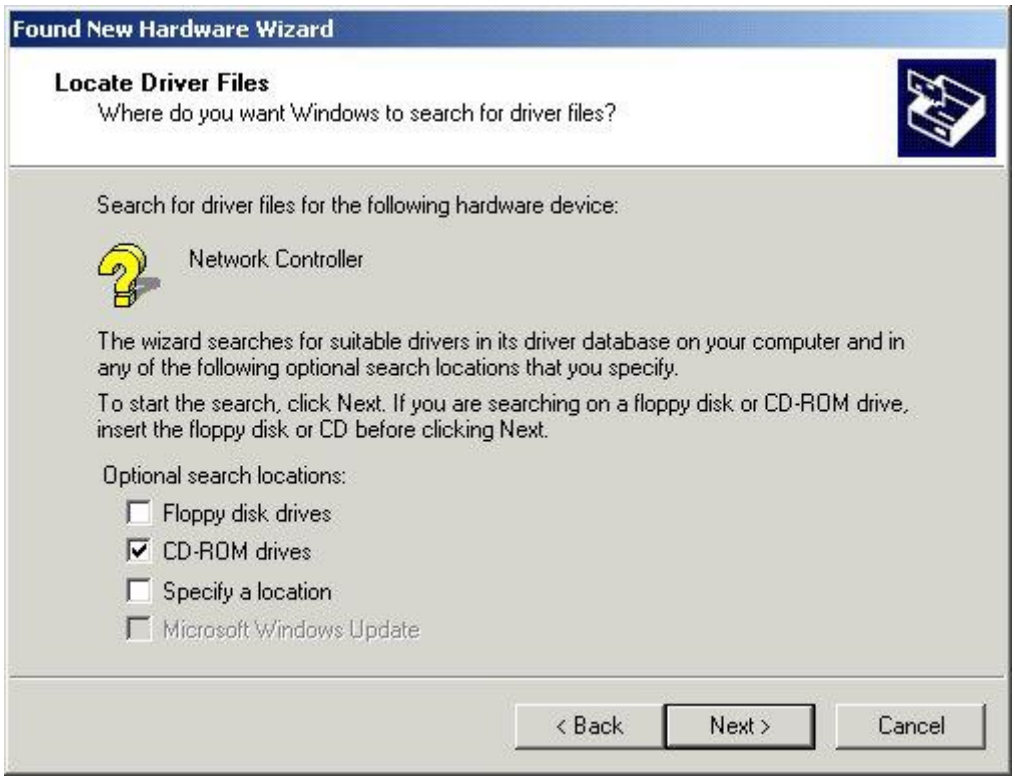
Step 2: A "**Found New Hardware Wizard**" window shows up. Click **Next** to proceed.

Found New Hardware Wizard
Welcome to the Found New Hardware Wizard
This wizard helps you install a device driver for a hardware device.
To continue, click Next.
< Back
Next >
Cancel

Step 3: Select "**Search for a suitable driver for my device (recommended)**".

Found New Hardware Wizard
Install Hardware Device Drivers
A device driver is a software program that enables a hardware device to work with an operating system.
This wizard will complete the installation for this device:
Network Controller
A device driver is a software program that makes a hardware device work. Windows needs driver files for your new device. To locate driver files and complete the installation click Next.
What do you want the wizard to do?
Search for a suitable driver for my device (recommended)
Display a list of the known drivers for this device so that I can choose a specific driver
< Back
Next >
Cancel

Step 4: Insert the Product CD-ROM into the appropriate drive. Click on **Next** to install the driver.


Found New Hardware Wizard
Locate Driver Files
Where do you want Windows to search for driver files?
Search for driver files for the following hardware device:
Network Controller
The wizard searches for suitable drivers in its driver database on your computer and in any of the following optional search locations that you specify.
To start the search, click Next. If you are searching on a floppy disk or CD-ROM drive, insert the floppy disk or CD before clicking Next.
Optional search locations:
Floppy disk drives
CD-ROM drives
Specify a location
Microsoft Windows Update
< Back
Next >
Cancel

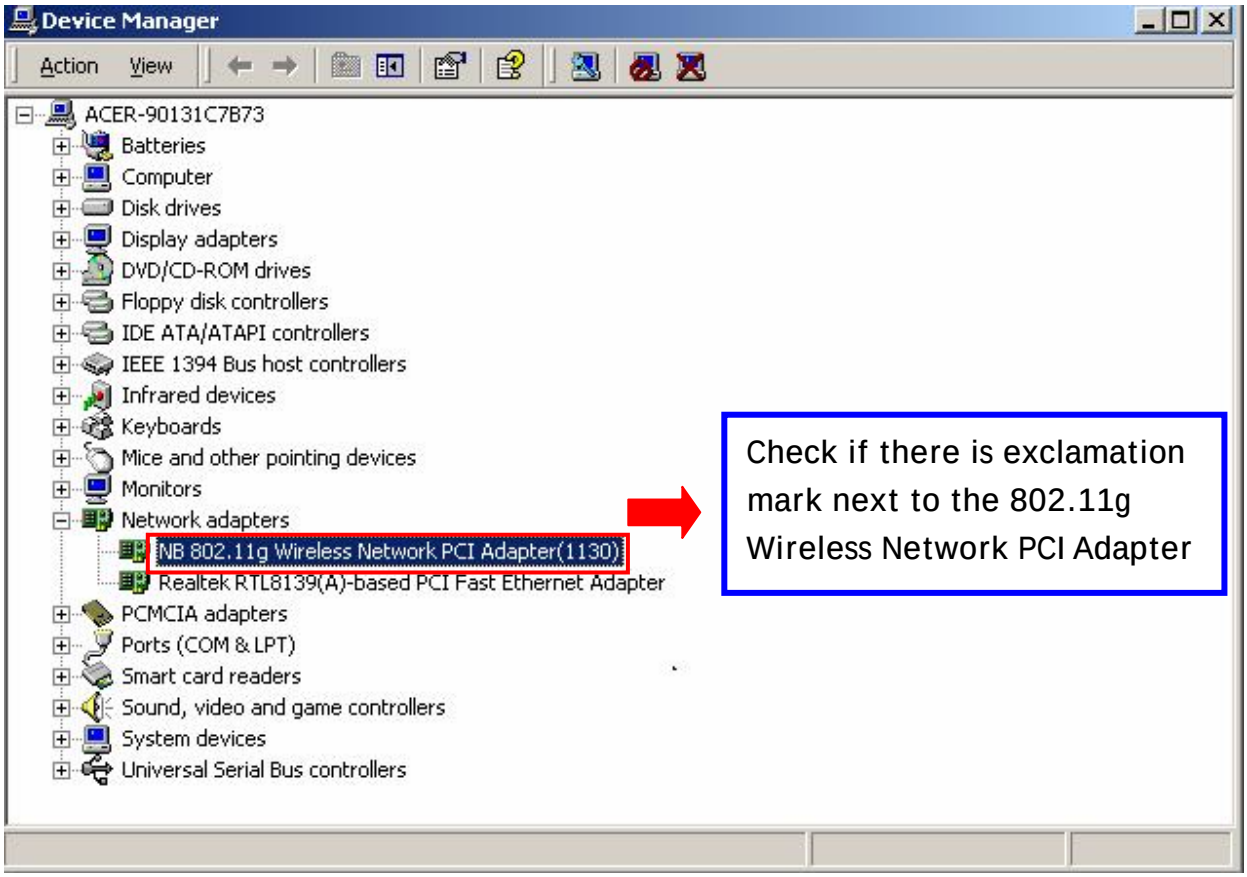
Step 5: The windows will find "**IEEE802.11g Wireless Network PCI Adapter**". Click on **Next** to continue.

Found New Hardware Wizard
Driver Files Search Results
The wizard has finished searching for driver files for your hardware device.
The wizard found a driver for the following device:
Network Controller
Windows found a driver for this device. To install the driver Windows found, click Next.
g:\product driver\xg-900\nobrand_utility1008_driver1063_fw0901\driver\wlannic.inf
< Back
Next >
Cancel

Step 6: Click **Finish** to complete the installation.

Found New Hardware Wizard
Completing the Found New Hardware Wizard
NB 802.11g Wireless Network PCI Adapter(1130)
Windows has finished installing the software for this device.
To close this wizard, click Finish.
< Back
Finish
Cancel

Step 7: Open **Control Panel/System/Device Manager**, and check **Network Adapters** to see if any exclamation mark appears. If no, your IEEE802.11g Wireless Network PCI Adapter is working well.



3-3 Set up IEEE802.11g Wireless Network PCI Adapter for Windows 98SE/ ME

Step 1: After inserting the IEEE802.11g Wireless Network PCI Adapter into the PCI slot on your PC, Windows will auto-detect new hardware and will display an "**Add New Hardware Wizard**" window. Click **Next** to continue.

Add New Hardware Wizard
This wizard searches for new drivers for:
PCI Network Controller
A device driver is a software program that makes a hardware device work.
< Back
Next >
Cancel

Step 2: Select "**Search for the best driver for your device (Recommended)**" and click **Next**.

Add New Hardware Wizard
What do you want Windows to do?
Search for the best driver for your device. (Recommended).
Display a list of all the drivers in a specific location, so you can select the driver you want.
< Back
Next >
Cancel

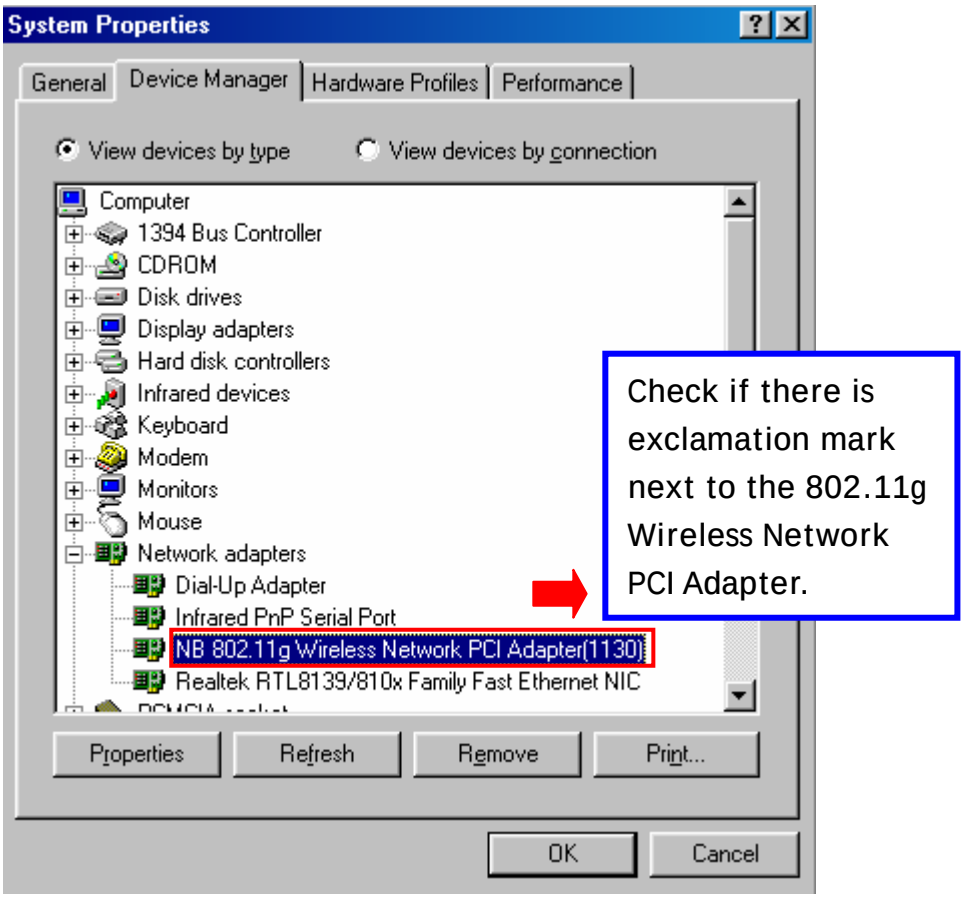
Step 3: Insert the Product CD-ROM into the appropriate drive. Click on **Next** to install the driver.

Add New Hardware Wizard
Windows will search for new drivers in its driver database on your hard drive, and in any of the following selected locations. Click Next to start the search.
Floppy disk drives
CD-ROM drive
Microsoft Windows Update
Specify a location:
Browse...
< Back
Next >
Cancel

Step 4: Once the [Please insert the disk labeled 'Windows 98 Second Edition CD-ROM/ME CD-ROM", and then click OK] window appears, insert and enter the path corresponding to the appropriate drives and click **OK**. Usually these files can be found at C:\Windows or C:\Windows\system. Usually these files can be found at C:\Windows or C:\Windows\system.

Step 5: Restart the computer to complete the software installation.

Step 6: Open **Control Panel/System/Device Manager**, and check **Network Adapters** to see if any exclamation mark appears next to the IEEE802.11g Wireless Network PCI Adapter. If no, your IEEE802.11g Wireless Network PCI Adapter is working well.



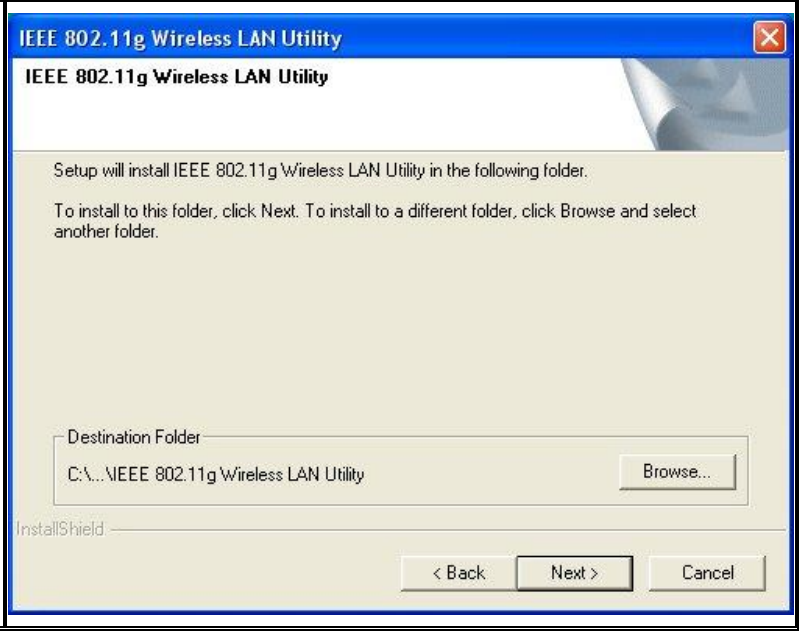
Chapter 4 Configure the Wireless Network PCI Adapter

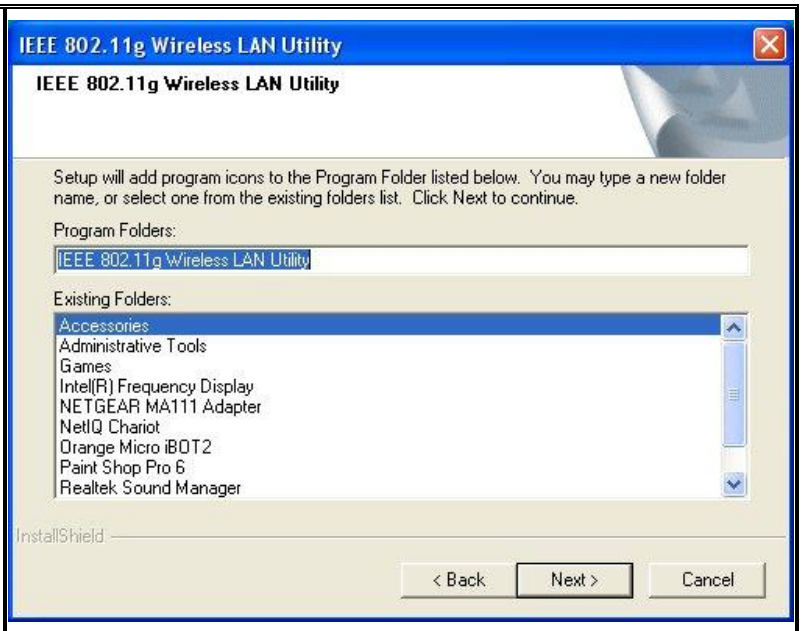
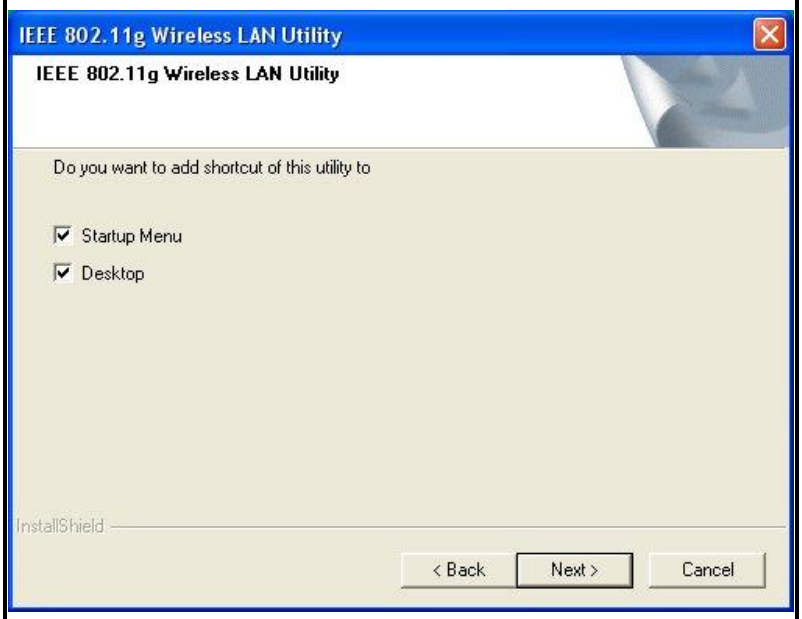
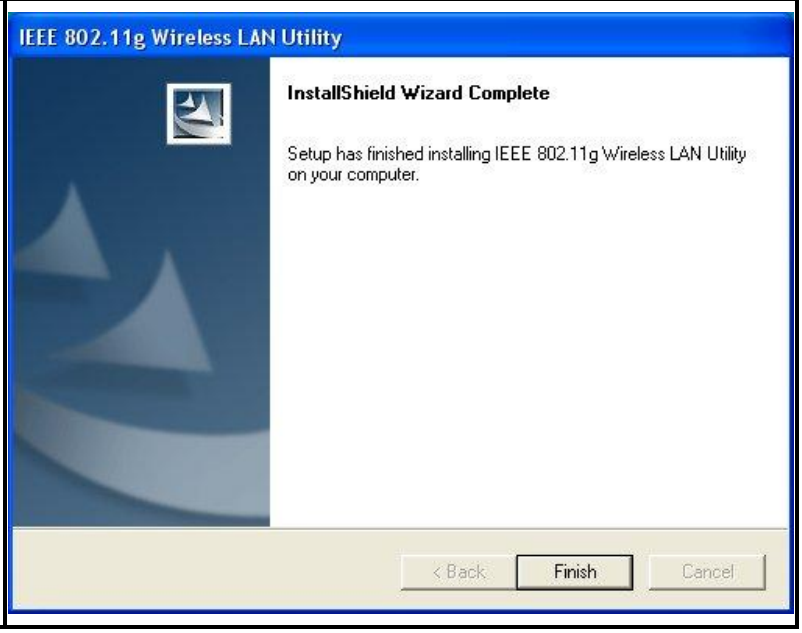
This chapter gives you assistance with detailed configuration for the IEEE802.11g Wireless Network PCI Adapter under Windows XP/2000/98SE/ME.

4-1 Install the WLAN Utility

To install the WLAN Utility, follow these steps:

Step 1: Insert the Product CD-ROM.
Step 2: Go to the **utility** folder and run **setup.exe**.
Step 3: The InstallShield Wizard will show up and guide you through the rest of the setup process.

*Run the **Setup** Utility*	
*Choose Destination Location and click **Next** to continue*	

*Select a program folder and click **Next***	
*Add shortcut of this utility to and click **Next***	
*Click on **Finish** to complete the installation*	

Upon completion, go to **Program Files** and run the WLAN Utility and its icon will appear in the **System Tray** in the bottom right corner of your task bar. Clicking on the icon will open the configuration window. When you minimize the window, the system tray icon will be loaded in the System Tray again.

The color behind the system tray icon indicates the link status:

Blue indicates a good or excellent link.

Yellow indicates a usable but weak link.

Red indicates no or very poor link quality. When you minimize the window, the system tray icon will be loaded in the **System Tray** again.

Exclamation mark indicates no wireless connection.

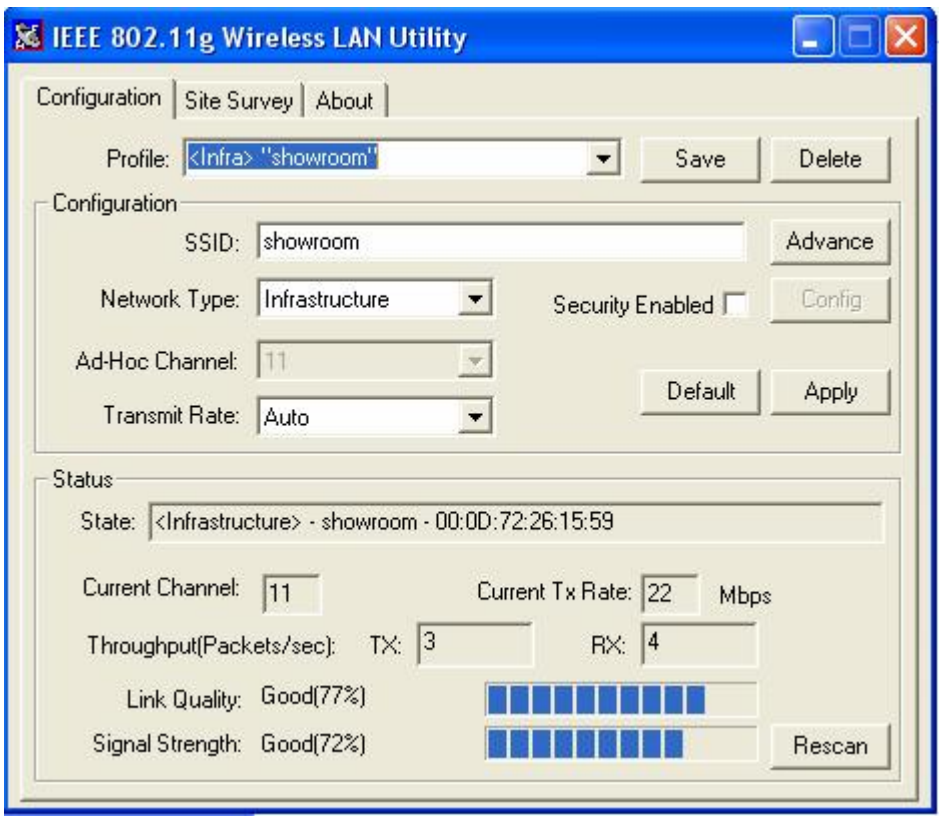
4-2 Use the WLAN Utility

The WLAN Utility enables you to make configuration changes and perform user-level diagnostics on your IEEE802.11g Wireless Network PCI Adapter in the Windows XP/2000/98SE/ME operating system environments. The WLAN Utility consists of window with 3 items for you to monitor and configure the IEEE802.11g Wireless Network PCI Adapter: **Configuration**, **Site Survey** and **About**.

Basic Setting

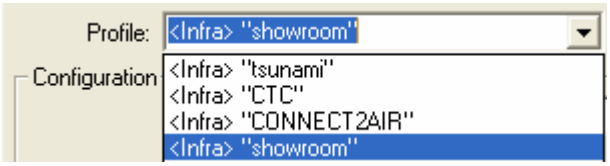
Configuration:

The **Configuration** item allows you to modify the configuration parameters for the IEEE802.11g Wireless Network PCI Adapter such as **Profile**, **SSID**, **Network Type**, **Ad-Hoc Channel**, **Transmit Rate**, **Security Enabled**, **RTS**, **Fragment Threshold**, and **Power Save** mode. Furthermore, you may monitor the current status of the IEEE802.11g Wireless Network PCI Adapter such as **State**, **Current Channel**, **Current Tx Rate**, **Throughput**, **Link Quality** and **Signal Strength**.



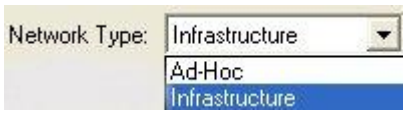
Profile

The **Profile** field allows you to set values for all parameters by selecting a previously defined profile. To create the profile, go to the **Profile** field, type a profile name and set the corresponding parameters. If one of the profiles is no longer used, you may remove it by clicking the **Delete** button. After changing parameters, save the profile and click the **Apply** button to take effect. You can have multiple profiles and modify the profile at any time.



Network Type

There are two network types for the IEEE 802.11g Wireless Network PCI Adapter to operate. If you need to access company network or Internet via an Access Point, select "**Infrastructure**". To set up a group of wireless stations for file and printer sharing, select " **Ad-Hoc**" (without Access Point). For standard **802.11 Ad-Hoc**, note that you may set wireless stations with the ***same ESS ID*** and the ***same channel***.



SSID

The SS ID is the unique ID used by Access Points and stations to identify a wireless Network. Wireless clients associating to any Access Point must have the same SSID. The default setting is ANY, which allows your IEEE 802.11g Wireless Network PCI Adapter to automatically associate to any Access Point (Infrastructure mode) in the vicinity of your wireless adapter. The ESS ID can be set up to *32 characters* and is case sensitive.

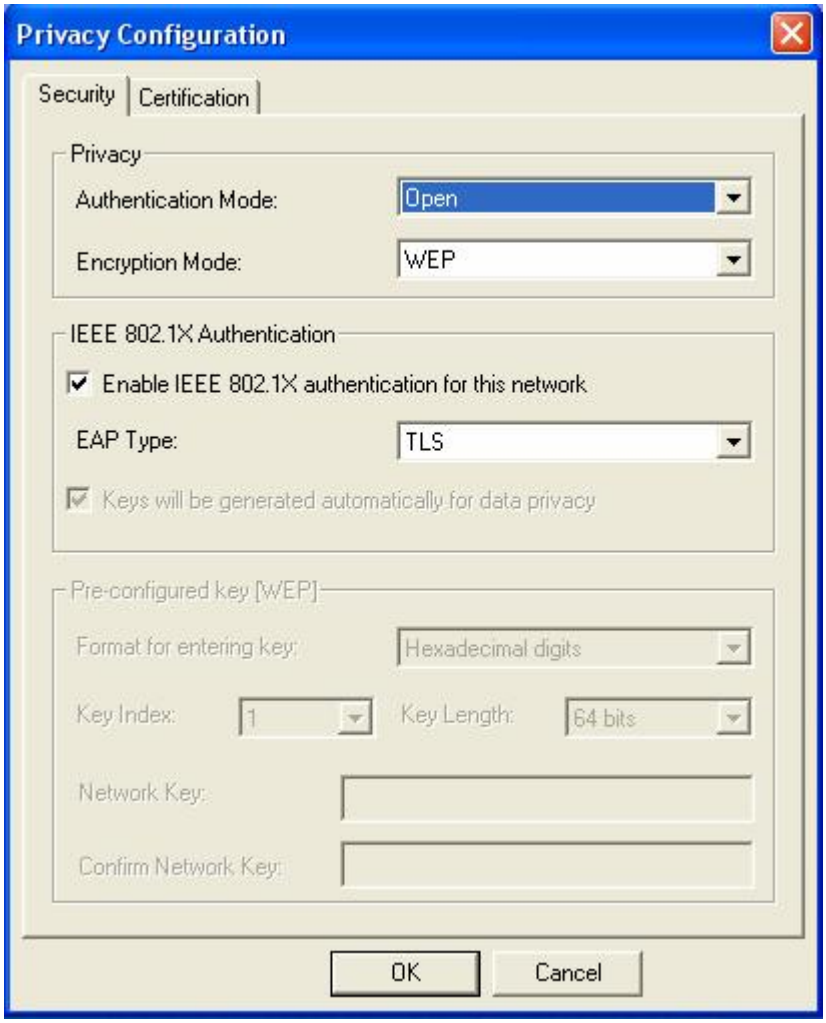
Transmit Rate

The IEEE 802.11g Wireless Network PCI Adapter provides various data rate options for you to select. Data rates options include **Fully Auto**, **1 or 2 Mb**, **5.5 Mb**, **11 Mb and up to 54Mb** in most networking scenarios, you will see that the factory-set default "**Auto**" will prove the most efficient. This setting will allow your IEEE 802.11g Wireless Network PCI Adapter to operate at the maximum data rate. When the communications quality drops below a certain level, the Wireless Network PCI Adapter will automatically switch to a lower data rate. Transmission at lower data speed is usually more reliable. However, when the communications quality improves again, the Wireless Network PCI Adapter will gradually increase the data rate again, until it has reached the highest available transmit rate.

Security Enable

To protect against hacker entering your system and prevent unauthorized wireless station from accessing data transmitted over the network, the WLAN Utility offers a sophisticated security algorithm. To activate security enable, click the check box next to **Security Enable**.

A **Privacy Configuration** window will then appear.

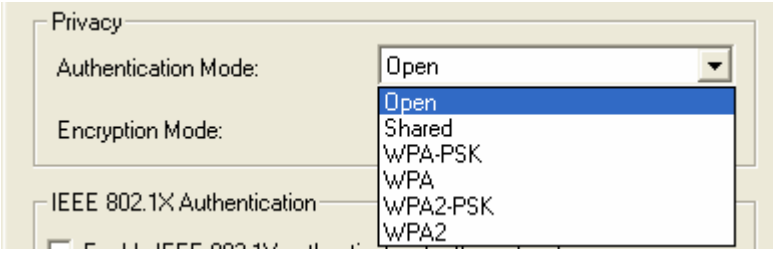


Privacy Configuration consists of specifying **Security** and **Certification**, as explained in the following:

Security Tab

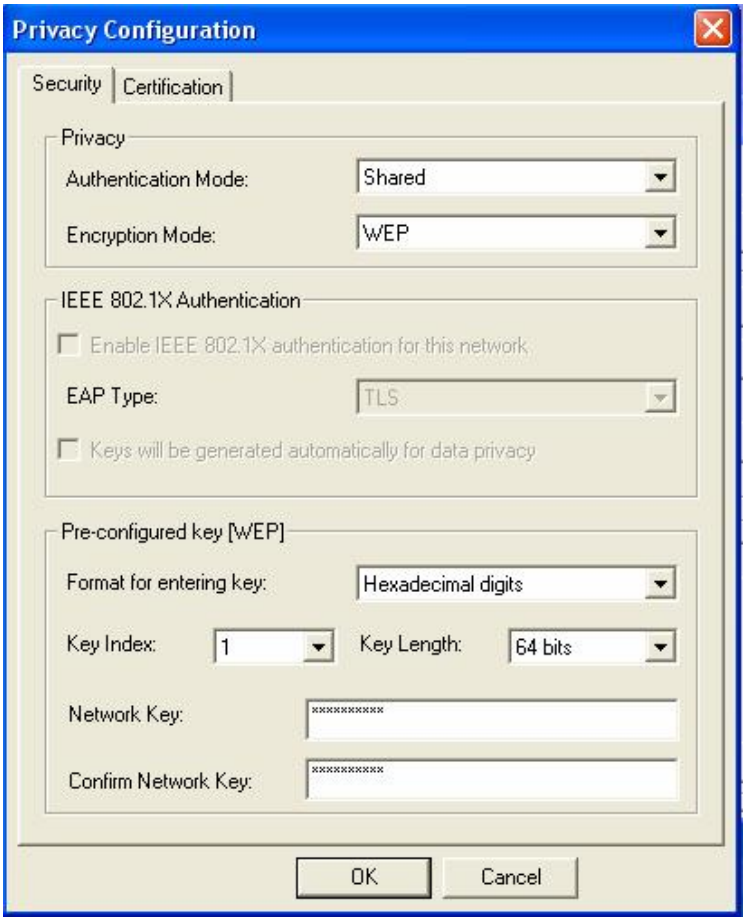
In order to join a network, networks may require an encryption key for association. You must configure the Authentication Mode and Encryption Mode for your keys in the **Privacy** section of this menu.

For Authentication Mode:

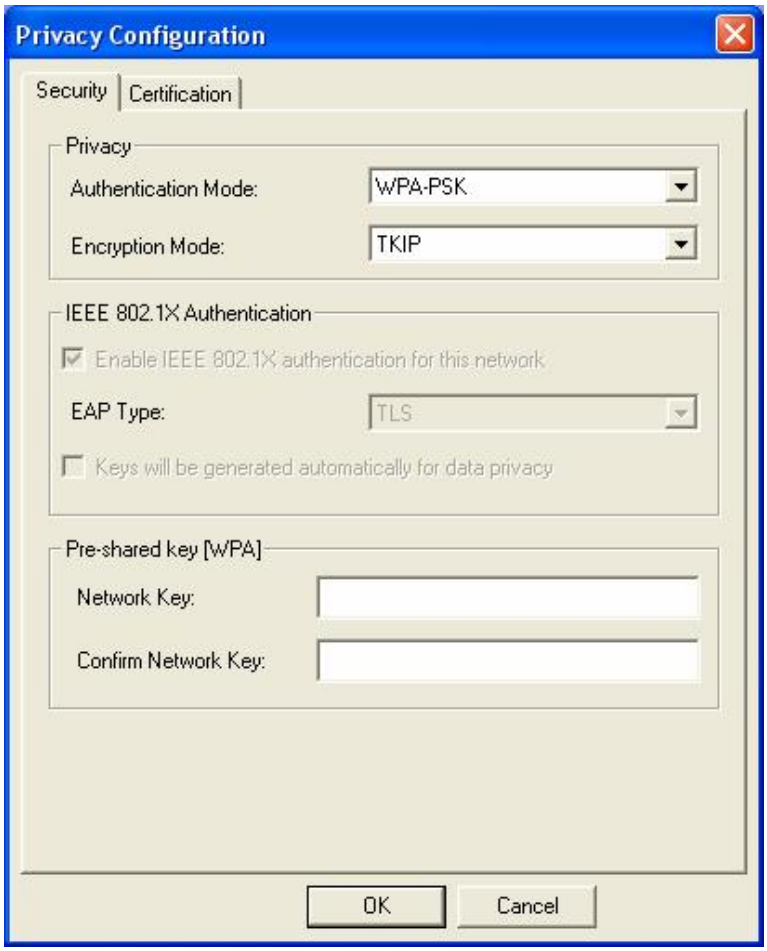


Open: Requires NO authentication, since it allows any device to join a network without performing any security check.

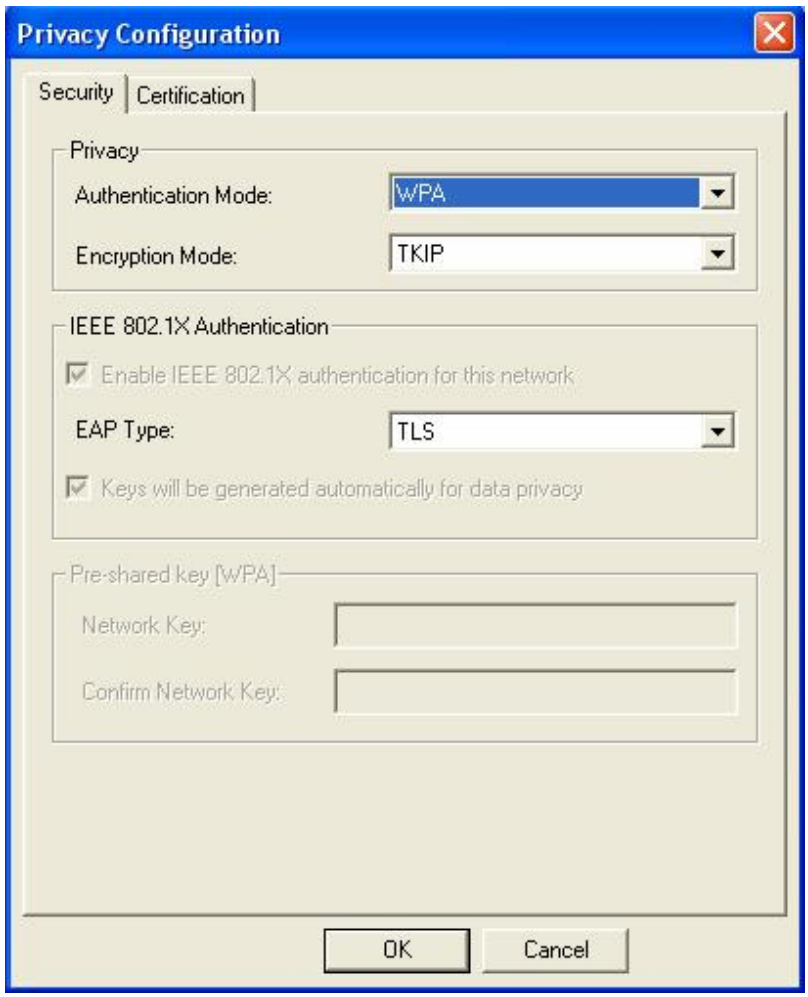
Shared: Requires that the station and the access point use the same WEP key to authenticate. This basically means that WEP must be enabled and configured on both the access point and the client with a same key, showed as below:



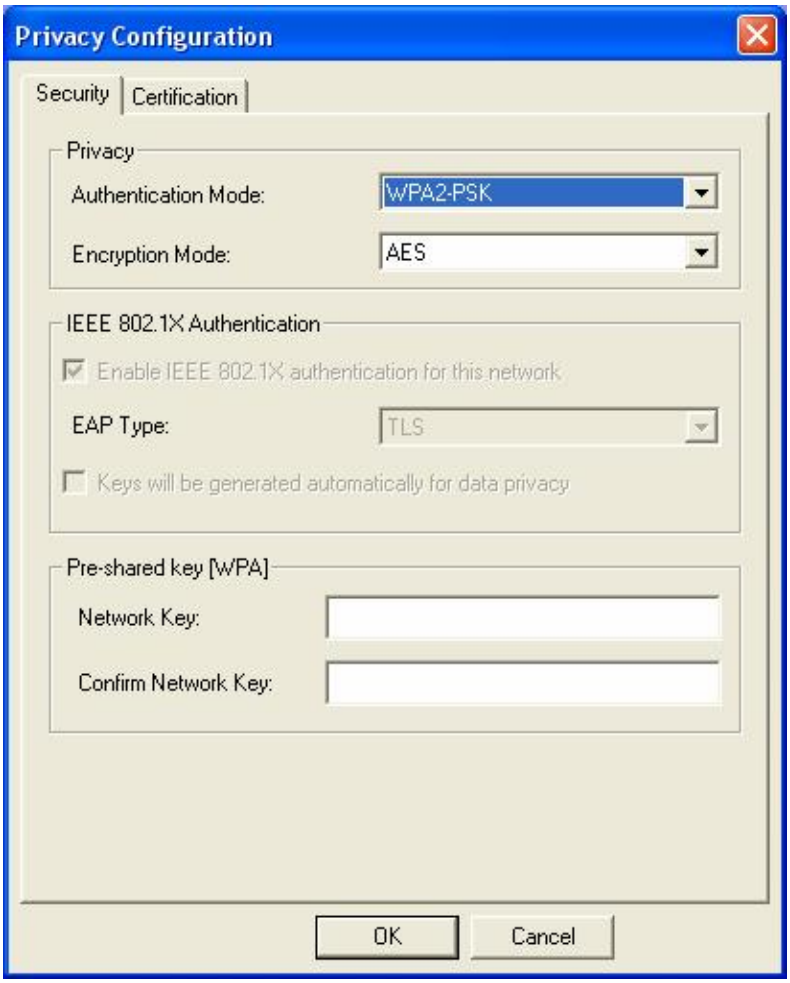
WPA-PSK: WPA offers a Personal mode of operation. In the Personal mode of operation, a pre-shared key is used for authentication. Allows you to gain access to a secured wireless network that the station and the access point use the same pre-shared key to authenticate. You must type a mixture of numbers and letters in the **Pre-shared key [WPA]** section of this menu. You may input either 8-63 ASCII characters or 64 HEX characters. Choose WPA-PSK if needed from Authentication Mode.



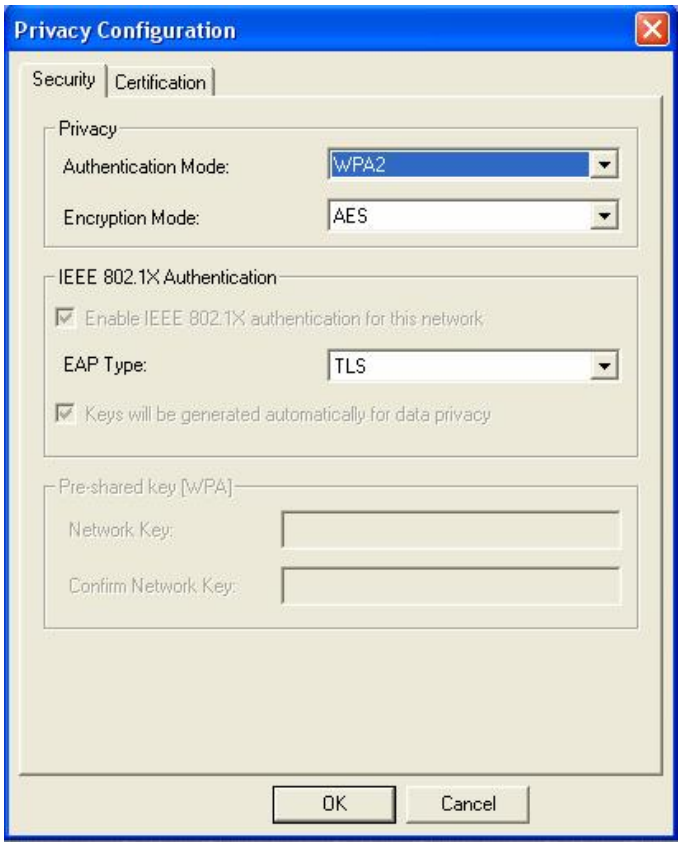
WPA: Allows you to gain access to a more secured wireless network that requires mutual authentication between client and access point with a Radius authentication server or other authentication server on the network. WPA uses 802.1X and Extensible Authentication Protocol (EAP) for authentication. WPA offers Enterprise and individual needs to meet the different market segments. This product supports various EAP types (TLS and PEAP), which require different credential authentication. In order to access the wireless network, you must select EAP type your service provider supplied in the section of **IEEE802.11X Authentication**. Choose WPA2 if needed from Authentication Mode.



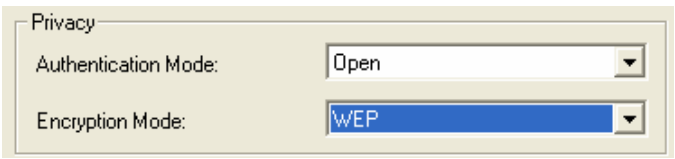
WPA2-PSK: Like WPA, WPA2-Personal offers authentication via a pre-shared key. Pre-shared key is usually used for Personal authentication. Personal mode requires only an access point and client on the network. Similarly, you need to type a mixture of numbers and letters in the **Pre-shared key [WPA]** section of this menu. You may input either 8-63 ASCII characters or 64 HEX characters. Choose WPA2-PSK if needed from Authentication Mode.

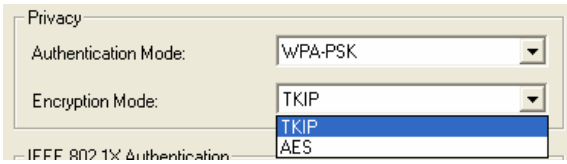


WPA2: WPA2 provides a stronger encryption mechanism than WPA. WPA2 is the second generation of WPA security, providing personal and enterprise users with a high level of assurance that only authorized users can access to their wireless network. There is no difference between WPA and WPA2. The only difference is that WPA2 provides a stronger data encryption via the AES, contrast to WPA, which uses Temporal Key Integrity Protocol (TKIP). Choose WPA2 if needed from Authentication Mode.



Once you choose your Authentication Mode, you then need to select the Encryption Mode.





For Encryption Mode

WEP: Specify the encryption keys. There are two methods to set the WEP keys, as described below:

Key will be generated automatically for data private

To create encryption keys automatically, click the **Key will be generated automatically for data private** check box.

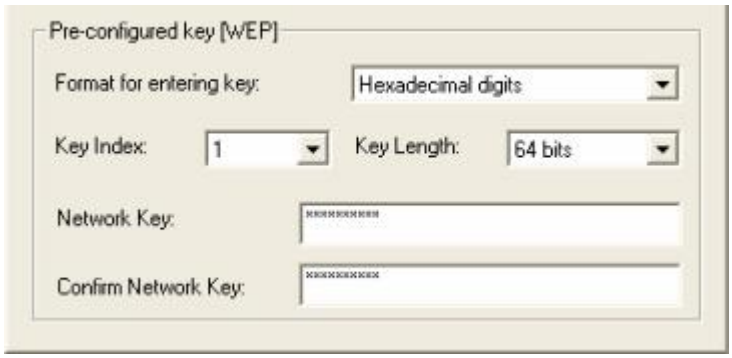
Note: This function is used in IEEE802.1X Authentication mode. Keys are dynamically generated and distributed by the authentication server. Actually, you can obtain keys by asking your service provider for further configuration and information to gain access to the wireless network.

Pre-configured key [WEP]

You can also create encryption keys manually by pulling down the **Key Length** menu and select either **64bit** or **128bit** encryption method in the Pre-configured key section of this menu.

For 64bit encryption you may choose:

- **Alphanumeric*:*** entering ***5 characters*** (case sensitive) ranging from "a-z", "A-Z" and "0-9" (e.g. MyKey).
- **Hexadecimal**: entering ***10 hexadecimal digits*** in the range of "A-F", "a-f" and "0-9" (e.g. 11AA22BB33, showed as below).



For 128bit encryption you may choose:

- **Alphanumeric*:*** entering ***13 characters*** (case sensitive) ranging from "a-z", "A-Z" and "0-9" (e.g. MyKey12345678).
- **Hexadecimal**: entering **26 *hexadecimal digits*** in the range of "A-F", "a-f" and "0-9" (e.g. 00112233445566778899AABBCC).

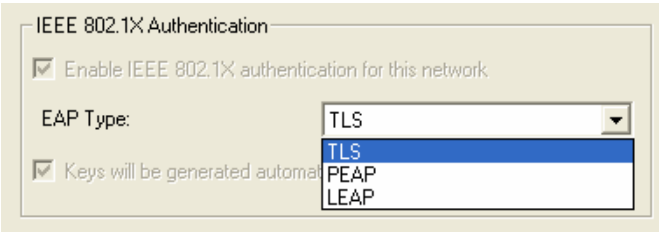
After you type, the utility uses an algorithm to generate 4 keys automatically. The **Key index** field allows you specify which of the four keys you use to transmit data on your wireless LAN. You can change the default key by clicking on the up or down arrow and make sure the default key is set up exactly the same on the Wireless LAN stations as they are on the wireless Access Points.

After entering the WEP keys in the key field, click the **OK** button to make the setting take effect.

TKIP: A greatly enhanced wireless encryption scheme. Designed to enhance protection by most popular WPA-capable devices. When TKIP is enabled, the key value will be generated automatically for data private.

AES: A sophisticated wireless encryption scheme. Designed to increase the strength and complexity of wireless encryption by WPA2. When AES is enabled, the key value will be generated automatically for data private.

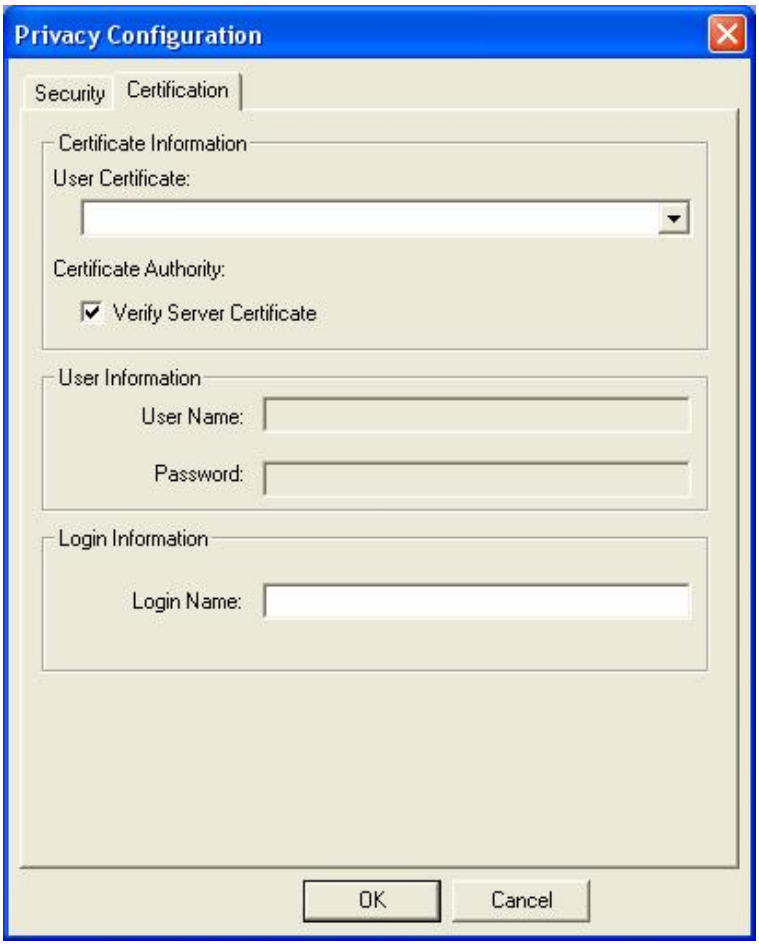
If the Security you are configuring requires authentication, simply go to the **IEEE802.1X Authentication** section of this menu to choose an EAP type.


IEEE 802.1X Authentication
Enable IEEE 802.1X authentication for this network
EAP Type:
TLS
TLS
PEAP
LEAP
Keys will be generated automat

Certification Tab

After you select the EAP type, you need to click **Certification Tab** to make advanced setting. The following describes configuration of each available EAP type.

TLS: Clicking the **Certification** tab for TLS shows the following menu.



TLS requires the entry of Certificate Information and Login Information for mutual authentication. This utility will auto-detect the Certificate Information for you to configure TLS easily. You only need to enter the **Login Name** in the Login information filed to authenticate. If you desire to use the Server Certificate manually, you can click the check box next to **"Verify Server Certificate"** and choose the usable selection in the User Certificate field using drop-down menu.

User Certificated: select one of user certificates you have enrolled.

TLS is used to create a secure tunnel through which authentication and encryption keys can be passed and require server and client side keys. To save the information you entered in the appropriate field, click the **OK** button. Otherwise, click the **Cancel** button to close the menu. If you want to return to select other EAP type, click the **Security** tab.

PEAP: Clicking the Certification tab for PEAP displays the following menu.

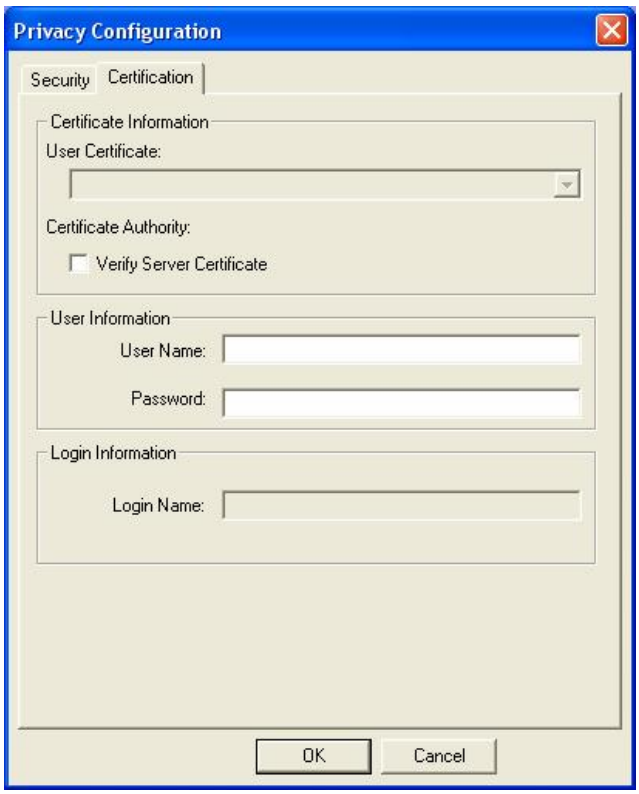


Figure 4.3

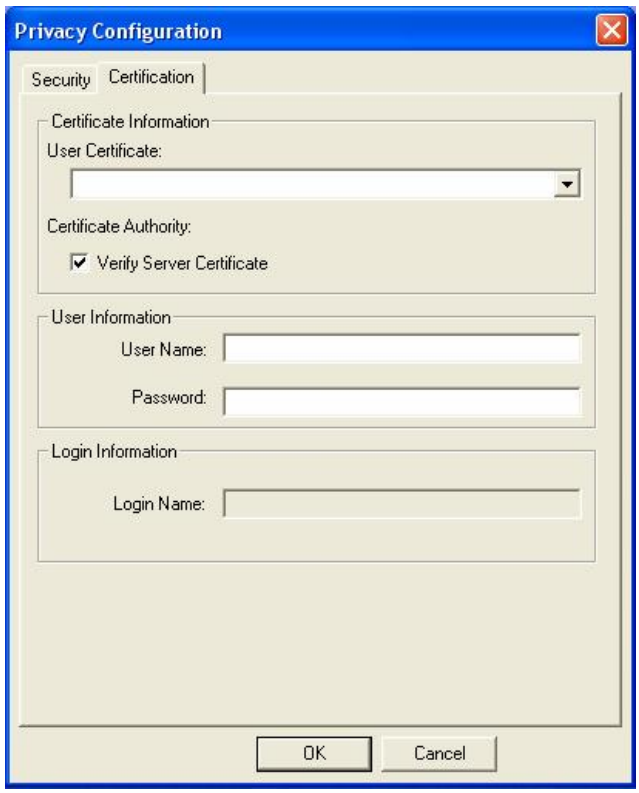
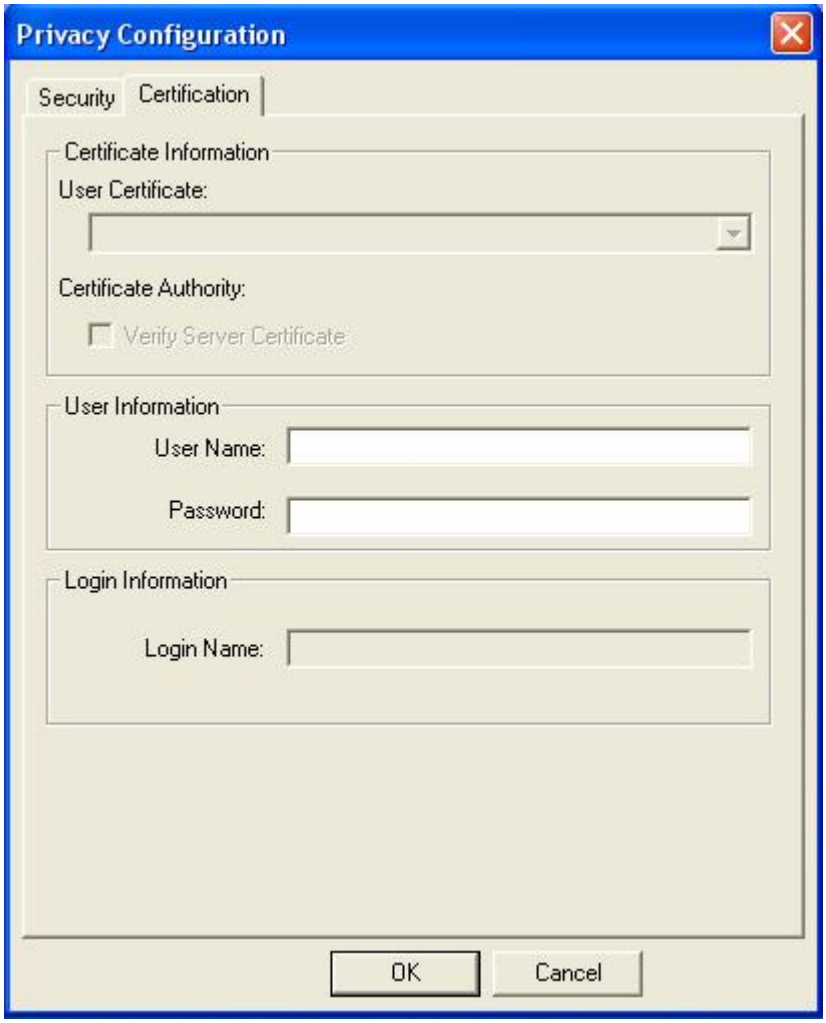


Figure 4.4

PEAP requires the use of Certificate Information and User Information. This utility will automatically identify Certificate Information and Login Information for users to configure PEAP easily. You only need to enter User Name and Password in the User information filed to authenticate (Figure 4.3). If you click the “Verify Server Certificate” check box, you are able to choose one of User Certificate from the drop-down menu. Furthermore, you need to input User Name and Password in the User Name field on the screen (Figure 4.4).

To save the information you entered in the appropriate field, click the **OK** button. Otherwise, click the **Cancel** button to close the menu. If you want to return to select other EAP type, click the **Security** tab.

LEAP: Clicking the **Certification** tab for LEAP shows the following menu.

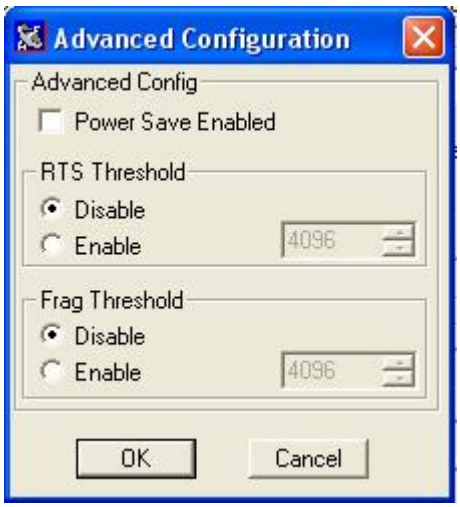


LEAP requires the mutual authentication between station and access points. You must present a **User Name** and **Password** in the User Information field that will be verified by LEAP-capable server. This mutual authentication ensures that only authorized users are allowed access to the network.

To save the information you entered in the appropriate field, click the **OK** button. Otherwise, click the **Cancel** button to close the menu. If you want to return to select other EAP type, click the **Security** tab.

Advance

The WLAN Utility also offers the advanced configuration for user to set the IEEE 802.11g Wireless Network PCI Adapter under certain network environment. These advanced options include Power Save Enabled, RTS Threshold, Fragmentation Threshold and Nitro Time. To enable the advanced configuration, go to the **Configuration** tab and click the **Advance** button.



Power Save Enabled

The Power Save option is designed to conserve battery life of you computer. When Power Save is enabled, your IEEE 802.11g Wireless Network PCI Adapter will go into sleep mode to minimize power consumption.

Note: When power saving mode is enabled, the Access Points you use need to support power saving as well so that the communication can be established.

RTS Threshold

RTS Threshold is a mechanism implemented to prevent the "Hidden Node" problem. If the "Hidden Node" problem is an issue, please specify the packet size. *The RTS mechanism will be activated if the data size exceeds the value you set.* It is highly recommended that you set the value ranging from 0 to 1500. The default value is **Disable**.

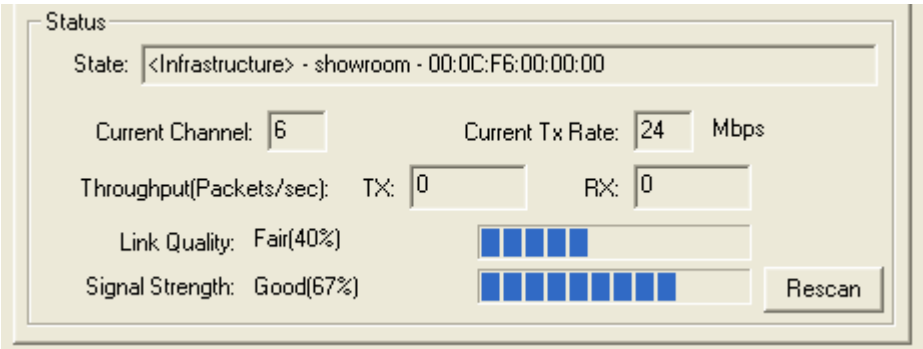
Note: Enabling RTS Threshold would cause redundant network overhead that could negatively affect the throughput performance instead of providing a remedy.

Frag. Threshold

Fragmentation mechanism is used for improving the efficiency when high traffic flows along in the wireless network. If your IEEE 802.11g Wireless Network PCI Adapter often transmits large files in the wireless network, you can enable the Fragmentation Threshold by clicking the **Enable** button and the mechanism will split the packet. The default value is **Disable**.

Status:

The Status field on the **Configuration** menu provides the following information.



State: When operating in Infrastructure mode, this field shows the MAC address of the Access Point with which the IEEE 802.11g Wireless Network PCI Adapter is communicating. When operating in Ad-Hoc mode, it shows the virtual MAC address used by computers participating in the Ad-Hoc network.

Current Channel: Shows the channel on which the connection is made.

Current Tx Rate: Shows the highest transmit rate of the current association.

Throughput: Shows the short term transmit and receive throughput in bytes/second, and is continuously updated.

Link Quality: Based on the quality of the received signal of the Access Point beacon. There are 5 states of link quality:

100%~80%: Excellent link.
80%~60%: Good link quality.
60%~40%: Fair link quality.
Under 40%: Poor or no connection.

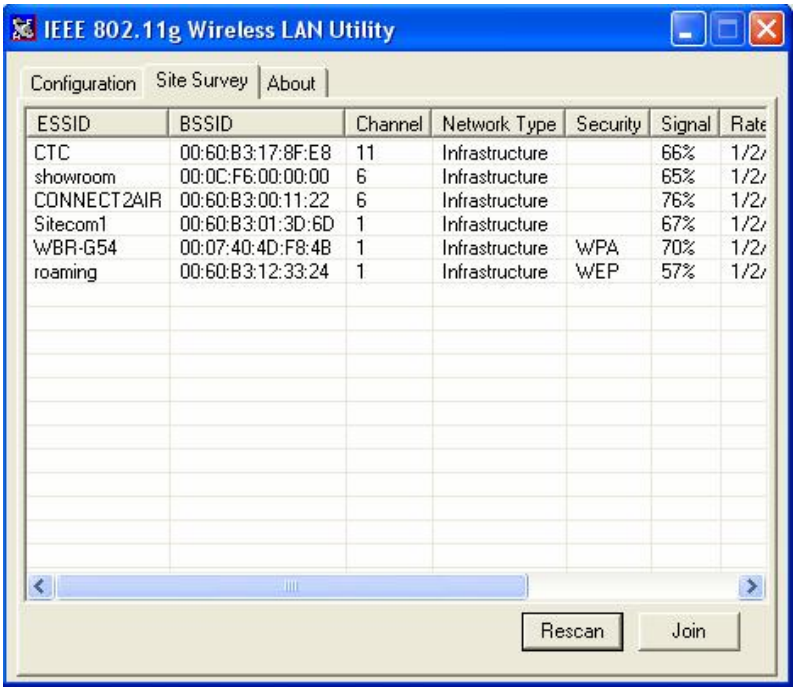
Signal Strength: Based on the received signal strength measurement of the baseband processor of the Beacon signal. Same as link quality, there are 5 states of signal strength:

100%~80%: Excellent signal strength.
80%~60%: Good signal strength.
60%~40%: Fair signal strength.
Under 40%: Poor or no signal strength.

You can click the **Rescan** button to force the radio to rescan all available channels. If your link quality or signal strength is poor, rescanning can be used to push the radio off a weak Access Point and search for a better link with another Access Point.

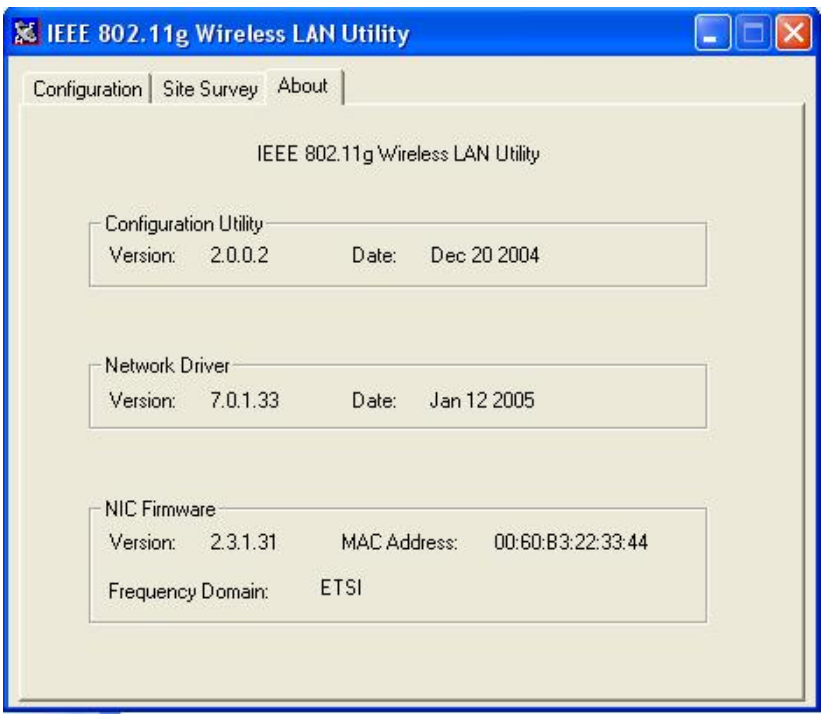
Site Survey:

By clicking the **Rescan** button, the AP Browser can display Access Points around the working environment. Besides showing the ESSID of each Access Point, it also displays BSSID, Channel, Capability, Signal, and Rates. To join any of the displayed Access Points, highlight the Access Point you desire to connect and then click the **Join** button to associate to the AP.



About:

The **About** item shows the versions of the Wireless LAN Utility, and driver, firmware of the IEEE 802.11g Wireless Network PCI Adapter. Also, the MAC address and frequency domain are displayed.



Limited Warranty

This Warranty constitutes the sole and exclusive remedy of any buyer or reseller's equipment and the sole and exclusive liability of the supplier in connection with the products and is in lieu of all other warranties, express, implied or statutory, including, but not limited to, any implied warranty of merchantability of fitness for a particular use and all other obligations or liabilities of the supplier.

In no even will the supplier or any other party or person be liable to your or anyone else for any damages, including lost profits, lost savings or other incidental or consequential damages, or inability to use the software provided on the software media even if the supplier or the other party person has been advised of the possibility of such damages.

The following are special terms applicable to your hardware warranty as well as services you may use during part of the warranty period. Your formal Warranty Statement, including the warranty applicable to our Wireless LAN products, appears in the Quick Installation Guide which accompanies your products.

Duration of Hardware Warranty: One Year

Replacement, Repair or Refund Procedure for Hardware:

If your unit needs a repair or replacement, return it to your dealer/distributor in its original packaging. When returning a defective product for Warranty, always include the following documents:

- The Warranty Repair Card
- A copy of the invoice/proof of purchase, and
- The RMA Report Form (To receive a Return Materials Authorization form (RMA), please contact the party from whom you purchased the product).

Upon proof-of-purchase we shall, at its option, repair or replace the defective item at no cost to the buyer.

This warranty is contingent upon proper use in the application for which the products are intended and does not cover products which have been modified without the reseller's approval or which have been subjected to unusual physical or electrical demands or damaged in any way.

Please complete the information below and include it along with your products.

Name:	
Title:	
Company:	
Telephone:	
Fax:	
Email:	
City/State/Zipcode:	
Country:	
Product Name:	
Serial Number:	
MAC Address:	
Invoice Date:	
Product Description:	

If you have any further questions, please contact your local authorized reseller for support.